

Serial No.: New – PCT/ JP2004/009887 Nat'l Phase
Filed: Herewith

AMENDMENTS TO THE SPECIFICATION:

Please add the following *new* paragraph on page 1, between lines 2 and 3:

CROSS-REFERENCE TO RELATED APPLICATIONS

This U.S. National stage application claims priority under 35 U.S.C. §119(a) to Japanese Patent Application No. 2003-191594, filed in Japan on July 4, 2003, the entire contents of which are hereby incorporated herein by reference.

Please replace the paragraph beginning at page 1, line 13 with the following rewritten version:

For example, Japanese Patent ~~Laid-Open Gazette Publication~~ Publication Nos. ~~tokukaihei~~ 10-201147, ~~tokukaihei~~ 11-98731, and ~~tokukai~~ 2000-69695 each intends to reduce cogging torque.

Please replace the paragraph beginning at page 1, line 16 with the following rewritten version:

Japanese Patent ~~Laid-Open Gazette Publication~~ Publication No. ~~tokukaihei~~ 10-201147 realizes a motor with low vibration and low noise by reducing cogging torque by determining circumferential direction target position of permanent magnets in two layers to be a specific relationship which suits to a specific formula, the permanent magnets being embedded in the interior of the rotor core, as illustrated in Fig. 1.

Please replace the paragraph beginning at page 1, line 22 with the following rewritten version:

Japanese Patent ~~Laid-Open Gazette Publication~~ Publication No. ~~tokukaihei~~ 10-201147 pays attention to cogging torque, so that formula differs depending upon the cycle of cogging torque. Especially, the value of θ in Fig. 1 becomes greater when concentrated winding is

employed, so that disadvantage arises in that permanent magnets disposed in outer peripheral side of the rotor cannot be made greater.

Please replace the paragraph beginning at page 2, line 8 with the following rewritten version:

Japanese Patent ~~Laid-Open Gazette~~ Publication No. ~~tokukaihei~~ 11-98731 intends to reduce cogging torque by varying the angle of aperture of the magnetic pole for every pole, as illustrated in Fig. 2.

Please replace the paragraph beginning at page 2, line 16 with the following rewritten version:

Japanese Patent ~~Laid-Open Gazette~~ Publication No. ~~tokukai~~ 2000-69695 determines the punching holes for embedding permanent magnet which are equal to one another, and varies the shape of elongate hole section each provided to contact to the edge face of the permanent magnet. This corresponds to application of pseudo skew, and intends to reduction effect in cogging torque.

Please replace the paragraph beginning at page 3, line 11 with the following rewritten version:

Japanese Patent ~~Laid-Open Gazette~~ Publication No. ~~tokukai~~ 2002-44888 can resolve the problem of the existence of extremely narrow angle of aperture in magnetic pole among the above problems. Specifically, an elongate hole section provided for contacting the edge face of the permanent magnet is divided in peripheral direction, as illustrated in Fig. 4, so that “auxiliary reinforcement rib” is provided. Japanese Patent ~~Laid-Open Gazette~~ Publication No. ~~tokukai~~ 2002-44888 intends to prevent deformation in the rotor.

Please replace the paragraph beginning at page 3, line 21 with the following rewritten version:

As is described in the above, Japanese Patent Laid-Open Gazette Publication Nos. ~~tokukaihei~~ 10-201147, ~~tokukaihei~~ 11-98731, ~~tokukai~~ 2000-69695, and ~~tokukai~~ 2002-44888 do not successfully reduce cogging torque while sufficient permanent magnet magnetic flux is maintained and abuse in sound due to unbalance vibration and in sound due to thrust force is not generated. Also, they are not the measure which pays attention to specific harmonics of the induction voltage, for example fifth order harmonics and seventh order harmonics. Especially, they are not the arrangement for sufficiently reduce sound when the motor has a great load.